Canada Alberta

FOREST RESOURCE DEVELOPMENT AGREEMENT
ENTENTE SUR LA MISE EN VALEUR DES RESSOURCES FORESTIERES

Canada Alberta

The Canada-Alberta Forest Resource Development Agreement is a subsidiary agreement of the Canada-Alberta Economic and Regional Development Agreement, which provides coordination and cooperation between the governments of Alberta and Canada in areas of Alberta's economic development.

The Canada-Alberta Forest Resource Development Agreement is funded equally by the governments of Canada and Alberta, from April 1, 1984, to March 31, 1989.

Its primary objectives are to ensure the long-term availability of timber supplies; to optimize timber uses; and to contribute to the growth and diversification of Alberta's economy.

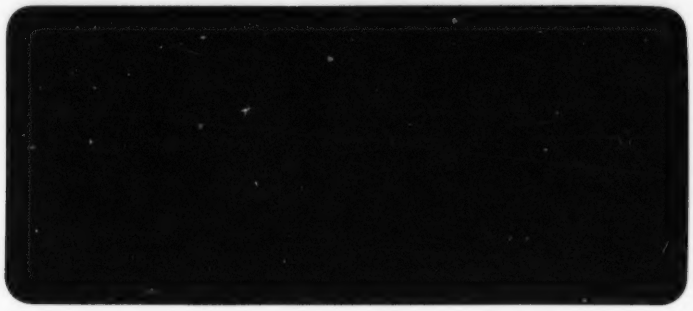
The Agreement comprises three programs: Reforestation; Applied research, technology transfer and opportunity identification; and Public information, evaluation and administration. These programs are managed by a joint Directorate and are implemented by the Canadian Forestry Service and the Alberta Forest Service.

L'Entente Canada-Alberta sur la mise en valeur des ressources forestières est auxiliaire à l'Entente Canada-Alberta sur le développement économique et régional, qui vise à assurer la coordination et la coopération des deux gouvernements relativement au développement économique de l'Alberta.

L'Entente Canada-Alberta sur la mise en valeur des ressources forestières est financée à parts égales par les gouvernements du Canada et de l'Alberta, et a cours du 1er avril 1984 au 31 mars 1989.

Ses objectifs principaux sont assurer la disponibilité à long terme de réserves de bois; optimiser leur utilisation; et contribuer à la croissance et la diversification de l'économie de la province.

L'Entente comprend trois programmes: Reboisement; Recherche appliquée, transferts de connaissances techniques et relevé des occasions; et Information, évaluation et administration. Ces programmes sont gérés par un Bureau de direction conjoint, et mis en oeuvre par le Service canadien des forêts et le Service forestier de l'Alberta.



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OR/OU Alberta Department of
Forestry, Lands & Wildlife
9915 - 108 Street
Edmonton, Alberta
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DEMAND FOR DISPOSABLE ASPEN CHOPSTICKS (WARIBASHI)

by

Tonan Commerce Ltd.[1]
1987

This is a joint publication of the Canadian Forestry Service and the Alberta Forest Service pursuant to the Canada-Alberta Forest Resource Development Agreement

[1]Vancouver, B.C.

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DISCLAIMER

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FOREWORD

This study was made possible with funding provided by the Forest Industry Development Division to investigate the current demand of chopsticks in Japan, the Republic of Korea and the Peoples Republic of China, and the use of Alberta aspen for the manufacture of chopsticks for export to these countries.

The findings will assist potential manufacturers of chopsticks in their planning.

The terms of reference are attached as appendix and the study follows this format.

EXECUTIVE SUMMARY

This study investigates the potential use of Alberta aspen for chopsticks, and the export thereof.

Japan is the major user of disposable chopsticks. Some 3 million cases (5,000 pairs per case) are consumed annually. Approximately 70% or 2.1 million cases are made from cedar, spruce and abies. Aspen accounts for only 15%.

Nothing indicates that aspen chopsticks are preferred. It is us who assume that only aspen is used for chopsticks, and have the misconception of cheap, abundant aspen trees with 100% clear wood. The use of a species is merely a question of price.

With ample supply of clear aspen, the processing of chopsticks as part of a wood products operation should be viable. The capital requirement for equipment should be about $200,000. A Japanese party should be actively involved in the operation to assure the necessary quality of clear, smooth, straight and neatly separatable chopsticks.

In conclusion, the entire production of about 10,000 cases p.m. can be exported, provided that we do not continue to under estimate the strict quality requirements.

Since clear aspen is not abundant, the cost of spruce and abies should be taken into consideration.

1. CHOPSTICKS IN JAPAN, KOREA, PRC

a) Japan

Although the use of the chopsticks, two small sticks, held together in one hand to lift food to the mouth, has not changed during the past centuries, the shape and the material has. Currently there are well over two dozen different shapes and materials.

There are different chopsticks for different occasions. However, chopsticks for in-home use are generally of durable material, whereas in a restaurant and with a commercially packed lunch box the chopsticks are disposed, indicating the concern for hygene.

Disposable chopsticks, or WARIBASHI, are in one piece and are broken apart prior to using them. The wood is only partly split by a sharp knife. Therefore, the two sides of the chopsticks, when broken apart are rubbed together 3-4 times to remove any sharp part that could cut the lips. It is important that the wood used splits easily at the uncut portion and that the surface is smooth and feels pleasant when touched. The wood should be white, or of light color, and must be absolutely free of taste and smell.

This study deals only with disposable chopsticks, waribashi. They can be subdivided into "Koban" and "Choroku" which are for general use and account for about 70% of waribashi, whereas "Genroku" account for 20%. No differentiation of these groups will be made in this study.

Fast food and wages have increased steadily over the past 20 years causing the cheaper waribashi to displace durable chopsticks. Japan started to import waribashi 10-15 years ago to reduce costs further.

The chopsticks manufacturing industry is small and does not even have an association. Therefore, there are no published figures on chopsticks. To keep overheads down, chopsticks manufacturing remained a cottage industry. For unknown reasons, the processing has never been automated, nor have computers been used in production. The people sorting the chopsticks are tremendously fast and competent. The frequent sharpening and positioning of the knives is the most important function for producing

acceptable waribashi. The manufacturing of durable chopsticks is complex, particularly, if they are lacquered and artistically decorated.

b) **Republic of Korea**

Korea uses mostly durable chopsticks, or cheap 2nd and 3rd grade waribashi, which are not suitable for export to Japan. In the past, Korea used its own poplar trees. Japan loved the waribashi made from it. However, the stands are now depleted and Korea has to resort to import of logs of poplar and other species.

Russian poplar from Siberia is very inexpensive, has a low yield, but has a peculiar smell. The logs are bought only because of the low price.

Since the finishing and sorting is difficult for workers in foreign countries, semi-finished waribashi are finished in Korea and then exported to Japan. A plant in Mexico follows this route. The prospects of selling finished waribashi to Korea are very slim. Korea produces a high quality; however, almost all facilities depend one way or another on Japanese technical input and updating.

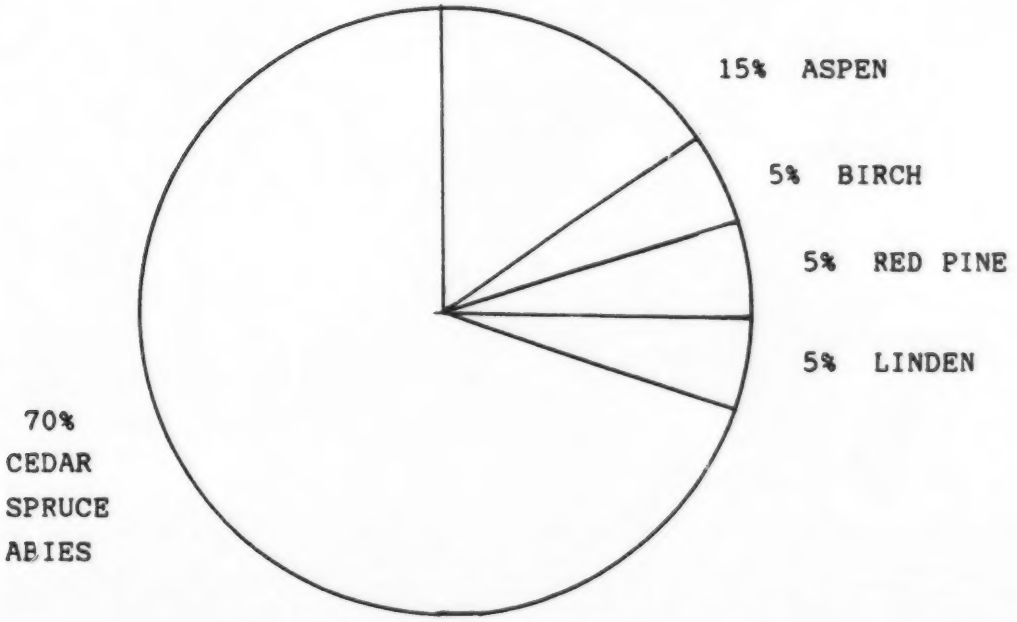
c) **Peoples Republic of China**

The PRC is in many ways like Korea, but the waribashi are of a lower, inconsistent quality. Currently PRC is a net exporter to Japan.

To summarize, waribashi, disposable chopsticks must be inexpensive and have a smooth surface which feels pleasant when touched. The wood can be any kind as long as it is white, clear wood, easy to process and easy to split. A high quality waribashi requires impeccable sharp knives and sorting.

2. WOOD SPECIES USED OVER THE PAST 10 YEARS

	Japanese	Percent	Grade
Cedar	'HINOKI'	70%	Common Grade
Japanese Spruce	'EZOMATSU'		
Abies	'TODOMATSU'		
Poplar		15%	
Birch, white	'SHIRAKABA'	5%	High Grade
Red Pine	'AKAMATSU'	5%	High Grade
Japanese Linden	'SHINA'	5%	High Grade



3. TREND OF PREFERRED SPECIES FOR WARIBASHI

The cost of waribashi is the most important factor. Therefore, if an acceptable wood species is found somewhere, it will be used till it looses its competitiveness.

As no statistical data are available, the change over the years can not be documented. But fluctuations appear to be insignificant.

In the past, S.E. Asian countries had a cost advantage over Japanese indigenious species with large diameter trees which yielded clear wood. However, with Japan's re-forestation programs in progress, ample culled trees are available at very little cost.

If a low cost species becomes available it is recommended to send samples to Japan and have waribashi manufactured from it. This will assure that the species is acceptable.

4. IS THERE A HIGH DEMAND FOR ASPEN WARIBASHI (CHOPSTICKS)

When Japan started to import waribashi, Korea used poplar, which was readily accepted in the market place. After depletion of the poplar stands, the use of Russian poplar resulted in low grade, low cost waribashi. Because of the peculiar smell, special treatment of the wood is necessary.

Hokkaido is providing a high percentage of poplar. The volume of North American aspen used is not known and seems to be insignificant, when compared to the total requirement.

Generally speaking, good aspen waribashi are accepted, but the qualities of aspen per se do not make it preferred over other species. It is mainly a matter of price.

The total demand for aspen waribashi is estimated at 450,000 cases (1 case is 5,000 waribashi) per annum.

5. POPULARITY OF ASPEN

There are no indications that aspen is a preferred wood for waribashi. Probably, because of the nature of waribashi, i.e. the one time use at the lowest cost, only the basic feature of the wood is important. In other words, aspen waribashi are used, but nobody specifies aspen as material for waribashi.

It appears that the abundance of aspen in Alberta which is assumed to be clear from top to bottom, and the white color of the wood led to the belief that aspen is the only accepted, cost effective material used for processing waribashi.

6. PRESENT REALISTIC DEMAND FOR WARIBASHI MADE FROM ASPEN

It is estimated that each year about three million cases of waribashi are consumed. Aspen has a share of about 15% or 450,000 cases. Imports are in the vicinity of 90,000 cases per annum.

Depending on the availability of inexpensive clear aspen and an acceptable quality level, at a cost which is slightly lower than Japanese or Korean made waribashi, the market share can be increased.

With aspen waribashi having approximately 15% share of the market over the past years, there are no indications at this time that aspen is bound to lose its popularity in the future.

7. ALBERTA AND ASPEN WARIBASHI

a) Suitability of Alberta Aspen or Balsam Poplar

Two years ago a sample log from Pelican Spruce Mills was sent to Japan and was made into waribashi.

The result was very good as it was judged superior to Russian aspen processed in Hokkaido.

1. The grain texture is better and less "woolin-g" effect occurs during processing which results in a smoother surface finish.

2. It has less smell.

b) Comparison of Aspen from Alberta with Other Regions

In the past, waribashi were manufactured in Quebec as semi finished product and sent to Korea for finishing and export to Japan. The product was not accepted in Japan. A similar case happened in B.C., but no details are available.

Japanese industry circles recommend an initial thorough investigation of the wood in Japan and the processing of waribashi in a Japanese facility. In this way, the

suitability of the aspen is assured so that only the processing has to be kept under control.

The question was raised, whether the same species of aspen grown in cold and moderate climate have identical properties. Japan still knows very little about N. American aspen and it is unlikely that a direct comparison of N. American aspen has been made. Essentially, it is a case by case situation.

c. **Could a Waribashi Production be Profitable**

Being a cottage industry in a highly competitive environment, access to inexpensive aspen, Japanese equipment and dedicated, loyal workers are imperative. However, if the sorting and sharpening of the knives of the trimming machine could be automated at a reasonable level of capital investment, the prospects for profitability should increase a good deal. Further, a prospective manufacturer should make the effort to see and study some operations in Korea and Japan.

Also it is worthwhile considering manufacturing semi-finished waribashi for 12-24 months to properly set up the sorting for assuring a consistently high level of quality.

d. **Cost of a Waribashi Operation**

The minimum output of an operation is about 1,800 cases (1 case is 5,000 waribashi) per month, or 80 cases per 8 hour shift per day for 22.5 days. Approximately C$100,000 is needed for the importation of rotary lathes, choppers, arranging and trimming equipment.

Domestically manufactured circular saw, steaming equipment, dryer, conveyors, fork-lift could cost about $100,000. The total would come to around $200,000. In Japan, for a 80 case a day operation, 10 workers and 10 support persons are used. A production level of 4,000 cases p.m. would typically require 40-50 persons. The number of workers can be reduced if one worker operates several choppers at a time, and overtime is made.

e. **Distribution of Waribashi**

The semi-finished or completed waribashi would be shipped to Japan in 40' containers, where they would either be finished or sent to the importer and then to primary and secondary distributors. The distribution channel is complicated and difficult to break through with direct shipments to end users, i.e. regular distributors will boycott end users who buy directly from a manufacturer.

There is little an Alberta company could do to reduce costs of the established distribution channel. The sale to an importer, or to a manufacturer if the waribashi are semi-finished, is the most common way to put waribashi into the Japanese market place.

f) **Setting Up of a Manufacturing Facility**

Being now common knowledge that the supply from N. America has major problems, importers and manfacturers in Japan became very cautious in participating in joint ventures.

Since the waribashi are for Japan, an acceptable product must be supplied. As no automated equipment is available in the market, the initial manufacturing should be done the traditional way, preferably semi-finished at first and finishing at a later date. Only thereafter can automation be successfully carried out.

Ideally, a Japanese company should participate with about 20% in a joint venture and should have ample knowledge of processing warabashi. A Japanese technician should be brought in for several months. This assures that the flaws in production will be corrected and yet they do not take a large risk. The manufacture of waribashi should be a part of an integrated wood products processing facility. The marketing should be left to the Japanese party.

Attempts to do the marketing as well have not been successful.

g) **Companies Interested in Investing or Participating in Waribashi Manufacturing**

The problems with quality from Mexico, and the unsuitable waribashi from Quebec are common knowledge and circulate in the industry.

Importers and manufacturers in Japan are sceptical about the quality and are looking closely at proposals of new operations. Because of the many failures in the past and our "know-it-all attitude" without having the slightest knowledge of the Japanese market, a wait and see attitude prevails.

Following is a list of importers who may be interested in participating or investing in a waribashi venture. None of the companies had been approached in this regard as Alberta's intention is not clear.

Japanese Chopstick Importers:

Saga & Co., Ltd.
Shinnihonbashi Kyodo Bldg.
1, 1-chome, Honcho
Nihonbashi, Chuo-ku
Tokyo, Japan
Tel: (3) 241-3011
Tlx: J25262 SAGAPALM
Mr. Y. Sasaki, President

K. K. Fujimoto Shokai
4-1-7, Tomifune-cho
Nakakaya-ku
Nagoya, Japan
Tel: (052)-361-1184

Kawabe Kikai Co., Ltd.
168, Yamakita
Marugame City,
Kagawa 763 Japan
Tel: (8772)-3-1201
Tlx: 582 5530 KAWABE
Mr. K. Kawabe, Trading Div.

Fuso Industrial Co., Ltd.
2-11, Nishitenme 3-chome,
Kita-ku,
Osaka, 530 Japan
Tel: (06) 363-7051
Tlx: 523 8455 FS FUSO
Mr. Matsui, Trade Dept.

U-World Inc.
ROI - Roppongi Bldg.,
5-5-1 Roppongi
Minato-ku,
Tokyo, Japan
Tel: (03) 478-7221
Tlx: 242 5527

8. SELLING OF WARIBASHI

Although chopsticks are used in many S.E. Asian countries, Japan is for practical purposes the only country which buys waribashi in large quantities. Compared to this, all other sales tend to be insignificant.

Japanese importers deal directly with the foreign manufacturer and have usually a good system in place, as they deal only on a long term basis. Spot sales are done infrequently, as manufacturers need a consistent level of production.

As of March '87, the CIF Tokyo price for a case (5,000 waribashi) of finished waribashi was estimated around C$23.00. The tariff on finished and semi-finished waribashi is 5.6%.

The tariff for preferred developing countries, which applies to Korea, is zero percent. However, the quota is usually filled in the first 3 months of the new fiscal year.

9. CONCLUSION

Japan uses annually about 3 million cases (5,000 pieces) waribashi, roughly 450,000 cases are aspen waribashi, of which about 90,000 cases are imported.

Alberta aspen was processed in Hokkaido and the product was readily accepted. A potential manufacturer should familiarize himself with the Japanese conditions and available equipment before making the final investment decision.

The key to success is a consistent quality, together with a competitive price. There should be no problem in selling the entire production of up to 10,000 cases per month.

Unless there is an abundant supply of near-by aspen with a high percentage of clear wood, a manufacturer should investigate the costs of spruce and abies as well.

APPENDIX

DEMAND FOR ASPEN CHOPSTICKS

The suggested terms of reference to this study are given below:

1. The study should be based on the appropriate countries at the Pacific Rim, namely: Japan, Korea and China.

2. Review the wood species used over the past 10 years to produce chopsticks.

3. Show trends which species are preferred for certain types of chopsticks and in which country.

4. Why is there so high a demand for aspen chopsticks today? (What is the demand and who is currently supplying that demand, and in what volumes?)

5. Is the popularity of aspen our perception only (Canada and U.S.A.)?

6. What is the present realistic demand for aspen to produce chopsticks and what is the future outlook? (North America and Pacific Rim)

7. Considering Alberta's situation:

   a) Is the Alberta aspen and/or balsam poplar suitable for chopstick manufacturing?

   b) Is Alberta aspen/poplar quality compared favorably to those of Saskatchewan, British Columbia, Minnesota, Arizona and New Mexico?

   c) Would the chopstick production be profitable?

   d) What would be the total cost of a typical chopstick operation?

   e) Where would the chopstick go and how (marketing, transportation)?

   f) How should the finances be structured?

   g) Identify companies from the Pacific Rim interested in investing and/or participating in chopsticks' manufacturing.

8. How chopsticks are marketed and sold internationally.